

# Fax

**To:** Ex. Eric Tak Wai Wong**From:** Peter J. Rashid, Esq.**Fax:** 15712704405**Pages:** 4**Re:** Application Serial No. 10/761897**Date:** 09/17/2008**Urgent**    **X**    **For Review****Please  
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Information****• Comments:**

Ex. Wong:

Please find attached a proposed set of claims that amend independent Claim 1, cancel the system claims and amend the computer readable medium claim.

Please feel free to call to discuss, or you may enter as an Examiner's Amendment.

Peter

1. (Currently Amended) A method for efficient frontier supplementation in multi-objective portfolio analysis, the method comprising:

generating an initial population of feasible solutions of portfolio allocations in a computing device;

generating a non-dominated solution set comprising a first efficient frontier in a portfolio performance space having at least three-dimensions using one of an evolutionary algorithm and optimization processing by using [[a]] the computing device;

identifying at least one region having a gap in the at least three-dimensions of the first efficient frontier using a visualization tool;

interactively placing at least one target in the at least one region of the first efficient frontier using the visualization tool; and

providing the initial population of feasible solutions to a Target Objectives Genetic Algorithm (TOGA); and

generating supplemental solutions to performing TOGA processing in the at least one region of the first efficient frontier using Target Objectives Genetic Algorithm (TOGA) to generate supplemental solutions to the first efficient frontier and to create a second efficient frontier, the second efficient frontier being used in investment decisions.

2-4. (Canceled)

5. (Previously Presented) The method of claim 1, further including the step of selecting at least one portfolio from the second efficient frontier.

6. (Previously Presented) The method of claim 1, wherein the TOGA further includes the steps of:

accepting a set of target vectors; and

generating a series of chromosomes, evaluated on the basis of the accepted target vectors, over multiple generations.

7. (Previously Presented) The method of claim 6, wherein the TOGA further includes the step of evaluating a fitness of each chromosome until a population with an acceptable fitness is determined so as to fill in the gap.

8-12. (Canceled)

13. (Previously Presented) The method of claim 1, wherein the gap is a region that is sparsely populated by possible solutions.

14-22. (Canceled)

23. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps computer-readable medium for efficient frontier supplementation in multi-objective portfolio analysis, the computer-readable medium said method steps comprising:

- generating an initial population of feasible solutions of portfolio allocations in a computing device;
- generating a non-dominated solution set comprising a first efficient frontier in a portfolio performance space having at least three dimensions using one of an evolutionary algorithm and optimization processing by using the computing device;
- identifying at least one region having a gap in the at least three-dimensions of the first efficient frontier using a visualization tool;
- interactively placing at least one target in the at least one region of the first efficient frontier using the visualization tool; and
- providing the initial population of feasible solutions to a Target Objectives Genetic Algorithm (TOGA); and
- performing TOGA processing in the at least one region of the first efficient frontier to generate supplemental solutions to the first efficient frontier and create a second efficient frontier, the second efficient frontier being used in investment decisions.

——— a first portion that generates a non-dominated solution set comprising a first efficient frontier in a portfolio performance space having at least three dimensions using one of an evolutionary algorithm and optimization processing;

——— a visualization tool by which a user identifies at least one region having a gap in the at least three dimensions of the first efficient frontier and interactively places at least one target in the at least one region; and

——— a second portion that generates supplemental solutions to the first efficient frontier using a Target Objectives Genetic Algorithm (TOGA) to create a second efficient frontier, the second efficient frontier being used in investment decisions.

24. (Canceled)